# US Climate Service

Rhodium Group is expanding its offerings with a new US climate research and data service. Available in Q2 2018 this service provides clients with access to Rhodium's proprietary state and city-level greenhouse gas (GHG) emissions inventory data, biannual national and state energy and GHG emissions forecasts, regular research analyzing major climate policy developments at the federal and state level, and direct access to Rhodium experts.

Rhodium Group is an independent research provider combining economic data and policy insight to analyze global trends. By combining policy expertise with a suite of detailed energy-economic models, Rhodium's Energy & Climate team helps clients understand the impact of energy and climate change policy on economic output, energy markets, and GHG emissions. For the last several years, Rhodium has been the go-to source for independent, rigorous analysis of the economic, energy market and GHG emissions implications of a range of federal and sub-national energy and climate policies. Rhodium's annual Taking Stock report has become the gold standard for objective, up-to-date analysis of the GHG implications of current US federal and state policies consistent with US government and UNFCCC accounting methodologies.

With the recent change in federal policy, states, cities and the private sector have become more central to US climate action. To help inform and assess the impact of subnational climate and clean energy policy, Rhodium has expanded its Taking Stock toolset to include a 50-state GHG emissions inventory and projection system that covers all sectors of the economy and all GHG emissions. We are making both available to clients as part of a new service, alongside timely short-form research covering major energy and climate policy developments and direct access to Rhodium staff.

## GHG INVENTORY

Rhodium has produced a unique 50-state GHG emissions inventory for the US that is consistent with EPA's national GHG inventory. This economy-wide inventory is broken down by each of the six Kyoto gases and by economic sectors (following IPCC reporting categories), including land use, land use change and forestry (LULUCF) for all 50 states. The inventory is used by the US Climate Alliance, the collection of 16 states and territories committed to meeting the Paris Agreement targets, in their annual progress report. It provides unique insights into the opportunities and challenges surrounding climate and clean energy policymaking at the state level. US Climate Service clients receive online access to this inventory and all updates made by Rhodium through a customizable web portal that allows users to explore, configure, visualize and download data. Clients also receive access to Rhodium's proprietary $CO_2$ emissions inventory for all cities and towns in the United States.

## US ENERGY & EMISSIONS PROJECTIONS

US Climate Service clients have access to detailed model output from regularly updated economy-wide energy and emissions projections from RHG-NEMS. RHG-NEMS is a modified version of the Energy Information Administration's National Energy Modeling System used to produce the Annual Energy Outlook. RHG-NEMS includes updated renewable energy, battery and other technology costs, macroeconomic and behavioral dynamics. It has also been modified to project emissions at the state level and to cover all GHGs, not just energy-related $CO_2$. Through our online portal, clients have access to emissions projections for all 50 states by year through 2050, along with major

energy market variables like prices, production, consumption, trade flows, power generation capacity, vehicle stock and building characteristics. Projections are updated on a biannual basis to account for all major policy changes at the federal and state level.

## RESEARCH NOTES

Clients receive regular and timely research notes analyzing major clean energy and climate policy developments at the federal and state level and quantifying their impact on US GHG emissions. This includes everything from state-level renewable energy policy to FERC regulations. Examples of this research include:

- Sizing Up EPA's Vehicle Emission Standards Rollback
- Final US Emissions Numbers for 2017
- Pacific Northwest Climate Hopes Dashed, for Now
- New Mobility Could Create Headwinds for Deep Decarbonization
- RGGI Expansion: The Road Ahead

- ANWR's Last Chance?
- Bending the Global Emissions Curve
- A Clean Energy Guide to the Tax Legislation Conference Committee
- Rethinking Zero Emission Vehicle Policy in the US
- The Real Electricity Reliability Crisis

Clients also receive the Climate Science Quarterly, a regular roundup of all major research developments and peer-reviewed publications in climate science, with a brief and accessible summary from Rhodium Climate Scientist Kelly McCusker on the significance and robustness of their key findings.

## ANALYST ACCESS

Clients have direct access to Rhodium's team of energy and climate policy experts for one-off queries or more in-depth discussion of the research notes and data products included in the service. US Climate Service team members include:

**Trevor Houser** (Partner) leads Rhodium's energy and natural resources practice. He also co-directs the Climate Impact Lab, a collaboration of leading research institutions combining climate, economic and data science to quantify the risks climate change presents. During 2009, Trevor left Rhodium temporarily to serve as a senior advisor at the US State Department where he worked on international energy, natural resource and environmental policy issues.

**Kate Larsen** (Director) manages Rhodium's work on US climate change and transportation policy. Prior to joining Rhodium, Kate worked at the White House Council on Environmental Quality where she was Deputy Director for Energy and Climate Change where she helped develop President Obama's Climate Action Plan. From 2007 to 2013, Kate worked in the Office of Climate Change at the US Department of State, serving as lead US negotiator on mitigation commitments and measurement, reporting and verification in the UN climate negotiations.

**John Larsen** (Director) leads Rhodium's US power and energy systems research. Previously, John worked for the US Department of Energy's Office of Energy Policy and Systems Analysis where he served as an electric power policy advisor. Prior to working in government, John led federal and congressional policy analysis in the World Resources Institute's Climate and Energy Program. He is a non-resident Senior Associate in the Energy and National Security Program at the Center for Strategic and International Studies.

**Shashank Mohan** (Director) leads the development and management of Rhodium's suite of economic models and other quantitative tools. He works across Rhodium's practice areas to analyze the impact of policy proposals and structural developments on specific markets and broader economic trends. Prior to Rhodium, Shashank worked with Columbia University's Earth Institute and the World Bank. His background is in information technology, with a previous career in software engineering at Microsoft. He is a graduate of the Indian Institute of Technology (IIT).

**Kelly McCusker** (Climate Scientist) lends her expertise to a range of Rhodium projects and clients. Previously, Kelly was a Postdoctoral Fellow and Research Associate at the University of Washington and the University of Victoria in British Columbia, Canada where she studied the role of the changing Arctic sea ice cover on global circulation, weather, and climate using a hierarchy of numerical global climate models. She received a Bachelor's in Mathematics from Providence College and a Ph.D. in Atmospheric Sciences from the University of Washington.

**Whitney Herndon** (Research Analyst) employs range of energy and economic models to analyze the impact of policy proposals on the US electricity sector, energy market and macroeconomy. Before joining Rhodium, Whitney was a policy analyst at the Nicholas Institute for Environmental Policy Solutions at Duke University. She has a Bachelor's in Environmental Systems and Molecular Biology from the University of California, San Diego and a Master's of Environmental Management from Duke University.

**Peter Marsters** (Research Analyst) at Rhodium and manages the firm's GHG emission inventory work and industrial sector policy analysis. He draws on an interdisciplinary background in economics, engineering, and public policy to analyze the latest energy and environmental trends in both the US and China. Prior to Rhodium, Peter was a researcher at the National Renewable Energy Laboratory. He has a Master's from UC Berkeley's Energy and Resources Group, and a Bachelor of Science in History and a minor in Mathematics from Bates College.

**Hannah Pitt** (Research Analyst) focuses on analyzing energy markets and policy, and on quantifying the impacts of climate change on human systems. Before joining Rhodium, Hannah was a Senior Policy Analyst at the Center for Clean Air Policy and conducted economic development research at Yale University and the Institute for Financial Management and Research. Hannah has a Bachelor's degree in Economics and Environmental Science from Northwestern University and an Master's degree in International Development from the Harvard Kennedy School.

## CONTACT INFORMATION

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